

Appln No. 09/607,605
Amdt. Dated April 07, 2004
Response to Office action of February 12, 2004

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REMARKS/ARGUMENTS

Claims

The Examiner rejected claims 1-3, 8-28 and 34-114 and objected to claims 1-3, 8-29 and 34-45. Claims 4-7 and 30-33 have been withdrawn from consideration. By this amendment, claims 1 and 27 have been amended. Therefore claims 1-114 remain pending in the application.

Claim Objections

Claims 1-3, 8-29 and 34-45 were objected to because the Examiner stated that the "form including printed coded data indicative of an identity of the form and of at least one reference point of the form" is not descriptive. The Examiner asked how the coded data indicates a form reference point.

The Applicant has therefore amended claims 1 and 27 to change the term "reference point of the form" to "location on the form". The term "location on the form" is more consistent with the language of the specification. Support for the amended language is found at several places in the specification that describe coded data embodied as tags having ring target structures (see, e.g., FIG. 5), including page 21, line 28, to page 22, line 6, which refer to the "hand-held sensing device" of claim 1 as a pen:

"The ring target 15 is only sought in a subarea of the image whose relationship to the image guarantees that the ring, if found, is part of a complete tag. If a complete tag is not found and successfully decoded, then no pen position is recorded for the current frame. Given adequate processing power and ideally a non-minimal field of view 193, an alternative strategy involves seeking another tag in the current image.

The obtained tag data indicates the identity of the region containing the tag and the position of the tag within the region. An accurate position 35 of the pen nib in the region, as well as the overall orientation 35 of the pen, is then inferred (at 34) from the perspective transform 33 observed on the tag and the known spatial relationship between the pen's physical axis and the pen's optical axis."

Further support concerning how the coded data indicates a location on a form is found in the specification at page 22, line 27, to page 23, line 4:

"A location-indicating tag contains a tag ID which, when translated through the tag map associated with the tagged region, yields a unique tag location within the region. The tag-relative location of the pen is added to this tag location to yield the location of the pen within the region. This in turn is used to determine the location of the pen relative to a user interface element in the page description associated with the region. Not only is the user interface element itself identified, but a location relative to the user interface element is identified. Location-indicating tags therefore trivially support the capture of an absolute pen path in the zone of a particular user interface element."

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Claim Rejections – 35 USC §103

Claims 1-3, 8-18, 22-25, 27-29, 34-41, 43, 44, 46-57, 61-64, 66-74, 76, 77, 79-92, 96-99, 101-110, 112 and 113 were rejected under 35 U.S.C. 103(a) as being unpatentable over Escallon (U.S. Pat. No. 5,799,157) in view of Suda et al. (U.S. Pat. No. 6,157,465). The rejection is respectfully traversed.

The Examiner states that Escallon discloses a form including data indicative of the identity of the form and a position of a sensing device relative to the form (Fig. 1, element 110). However, element 110 of Escallon is identified only as a communications link between a transaction management system and a client computer (see, e.g., col. 2, line 55). Escallon does not disclose any structure similar to the coded data or to the sensing device of the present claims. Thus the communications link of Escallon does not disclose or fairly suggest a form including data indicative of the identity of the form and a position of a sensing device relative to the form. + 100

The Examiner has equated the client computer 100 of Escallon with the sensing device of the present claim 1. The Applicant submits that the definition of the sensing device in claim 1 is adequately clear and precise under 35 U.S.C. 112, second paragraph, to preclude the analogy drawn by the Examiner concerning the client computer 100 of Escallon. Claim 1 states that the sensing device receives indicating data regarding the position of the sensing device relative to the form. The client computer 100 of Escallon does not perform that function. Although the Applicant appreciates that limitations from the specification are not read into the claims, claims are construed in light of the specification, of which they are a part. See Slimfold Mfg. Co. v. Kinkead Indus., Inc., 810 F.2d 1113, 1116, 1 USPQ2d 1563, 1566 (Fed. Cir. 1987). Thus, further clarification of the term "sensing device" as used in claim 1 is found in the specification from page 30, line 5, to page 32, line 12:

"The active sensing device of the netpage system is typically a pen 101, which, using its embedded controller 134, is able to capture and decode IR position tags from a page via an image sensor... The pen determines the position and orientation of its nib on the netpage by imaging, in the infrared spectrum, an area 193 of the page in the vicinity of the nib. It decodes the nearest tag and computes the position of the nib relative to the tag from the observed perspective distortion on the imaged tag and the known geometry of the pen optics."

The Examiner also equated the controller 605 of Suda et al. with the sensing device of the present claim 1. But the controller 605 of Suda et al. is also very different from the sensing device as defined in the present claim 1. At col. 10, lines 3-7, Suda et al. defines "A controller 605, which has a display, displays a control panel for, or information concerning a device, such as a printer 601 or 602, a facsimile machine 603 or a PC 604, only by approaching the device, and sends instructions to the device to control it." The controller 605 of Suda et al. is thus similar to a personal digital assistant (PDA); but it is not similar to a sensing device that senses coded data printed on a form and thereby determines its own position relative to the form, as defined in the present claim 1.

Finally, claims 19-21, 26, 42, 45, 58-60, 65, 75, 78, 93-95, 100, 111 and 114 were rejected under 35 U.S.C. 103(a) as being unpatentable over Escallon (U.S. Patent No. 5,799,157) in view of Suda et al. (U.S. Patent No. 6,157,465) further in view of Wilz Sr. et al. (U.S. Patent No. 5,992,752). These rejections are also respectfully traversed.

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The Examiner equated the print media 39 of Wilz Sr. et al. with the printed forms of the present claim 1. However, the print media 39 of Wilz Sr. et al. includes "URL-encoded truncated symbols 8" that the Applicant asserts are not analogous to the coded data indicative of at least one region of the form as defined in the present claim 1. Wilz Sr. et al. discloses using bar codes to encode only Internet Uniform Resource Locators (URLs). The symbols 8 of Wilz Sr. et al. therefore do not include, and Wilz Sr. et al. does not fairly suggest, any information that identifies where the symbols 8 are located on the print media 39. The clear and definite limitations recited in the present claim 1 are therefore not obvious over Escallon in view of Suda et al. further in view of Wilz Sr. et al.

In light of the above arguments, the Applicant asserts that the Examiner's remaining rejections are now moot.

Conclusion

The Applicant has amended the claims to conform more closely to the language of the specification. Further, as requested by the Examiner, the Applicant has provided specific page and line numbers from the specification showing where support is found for the clear and definite limitations recited in the claims. Finally, clear distinctions between the prior art cited by the Examiner and the present claims are provided above. Accordingly, it is submitted that the application is now in condition for allowance. Reconsideration and all

owance of the application is courteously solicited.

Very respectfully,

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